Restricted

NAVY DEPARTMENT

BUMED NEWS LETTER

a digest of timely information

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TABLE OF CONTENTS

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Suppressive Atabrine Therapy: In the past the suppressive administration of atabrine has been discontinued by some units on leaving a malarious area for combat duty in a non-malarious area. In a recent operation, one unit discontinued the use of atabrine under such circumstances in spite of the critical nature of the combat mission and the absolute lack of hospital facilities for the care of relapsing cases.

In other instances, when troops have been removed to rear non-malarious areas, it has been the practice to discontinue atabrine suppression abruptly. Such a procedure permits an immediate high primary attack rate

and a high relapse rate. This results in the physical and mental exhaustion of troops, and places valuable units in an invalid or convalescent status.

There is no indication that the continued use of atabrine in the usual suppressive dosage causes any toxic effects. Recent evidence indicates that prolonged suppressive administration of atabrine prevents further relapses in cases of falciparum malaria; it is probable that many falciparum infections are completely cured without ever having caused clinical symptoms.

The Bureau desires that in the future troops shall not be removed from suppressive atabrine therapy when they are being transferred from a malarious to a non-malarious combat area. It is further desired that the discontinuation of atabrine suppression in non-combat areas, whether in malarious or non-malarious areas, shall be undertaken only after due consideration and consultation with the area malaria control officer or other higher authority. If the decision is made to discontinue atabrine, it should be done by a staggered withdrawal compatible with hospital facilities and the military situation.

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Diphtheria in Military Medical Practice: A recent report from a hospital ship (Norris et al., U. S. Naval Medical Bulletin, 42, 518, (1944)) indicates that diphtheria is being observed among military personnel in the tropics. Eighteen cases are reported, of which 13 developed some form of paralysis. In a number of these individuals, diphtheria was not suspected prior to onset of the weakness. Information has been received that diphtheria has also made its appearance in the Armed Forces elsewhere in the tropics. A portion of this has been typical faucial diphtheria, but one or two reports have dealt with the finding of virulent C. diphtheriae in indolent "desert sores" and "tropical ulcers." Several of the cutaneous cases developed peripheral palsies, and at least two of the palsies occurred in individuals reported to be Schick-negative.

Such figures and case reports in themselves are not of grave import. They do raise, however, the whole problem of diphtheria recognition and control. There are available at this time reports which show that clinical diphtheria in the occupied countries of Europe has reached proportions far above the levels which prevailed during the years before the war. Nothing very definite is known about the present or past morbidity of this disease in the major war zones on the other side of the globe. Statistics in the League of Nations Reports in the '30's tend to support the impression that diphtheria was probably more prevalent in the tropics than had formerly been believed. In fact, it is stated that "diphtheria is equally severe in warm and cold countries, in the East and in the West." Epidemiological studies reported some years ago showed that from 75-90 per cent of children in the Philippines and the East Indies were Schick-negative. This work, together with other studies which indicated that the incidence of apparently healthy diphtheria

carriers in the tropics was about equal to their incidence in north temperate climes (as New England), led to the conclusion in the League report that diphtheria was probably endemic in a very mild form throughout the tropics.

Recently surveys have been made to determine the present proportion of Schick-positives in Army and Navy personnel. The results of these independent projects are strikingly in agreement, for both groups were found to show 40-45 per cent of the men Schick-positive. In comparison with the 15-20 per cent which would have been expected to be Schick-positive (on the basis of studies made in this country some years ago), this is a very sharp rise in the number of susceptibles. The higher percentage of Schick-positive individuals reported in the recent studies may possibly be accounted for by two factors: (1) An increasingly large number of individuals is being immunized against the disease. The immunity produced by one course is not lasting. (2) The presence in the population of a large number of artificially immunized individuals reduces the general diphtheria morbidity. Thus the number of people Schick-negative as a result of actual childhood infection has been reduced as an indirect result of large-scale toxoid programs.

The factor of first importance in the recognition of pharyngeal diphtheria is an awareness of the possibility of its existence. Certainly it should be considered seriously in the differential diagnosis of every case of pharyngitis and tonsillitis. At this time, however, it is desired rather to call attention to the possibility of seeing diphtheria in the tropics or in other war zones than to detail the clinical appearance of the local lesions.

As for cutaneous diphtheria, it has been known for some years that an appreciable proportion of cases of "tropical ulcer" and "desert sore" can be found to contain non-virulent diphtheria bacilli, or diphtheroids. But that from 30 to 50 per cent of the diphtheria bacilli isolated may be virulent and that many of the patients with skin lesions (and without clinical evidence of faucial involvement) subsequently develop typical post-diphtheritic paralyses are facts less well known. In some reports the incidence of paralysis has run as high as 27 to 30 per cent, and cases have been noted even among the Schick-negatives.

Furthermore, typical cases of pharyngeal diphtheria have been traced to skin infections which harbored C. diphtheriae. A number of different kinds of lesions are associated with cutaneous diphtheria; the more commonly encountered seem to be indolent, shallow, dirty ulcers with black scabs, as well as punched-out ulcers with dirty, unhealthy granulations which fail to heal readily, even in patients who are Kahn-negative. Antitoxin does not seem to speed the

healing of the local lesions, but its use is important in order to protect the patient against delayed effects from absorbed toxin.

Cultures on Loeffler medium and smears should be made in suspected cases and the stained smears examined for morphological diagnosis. Fermentation reactions are of further help in differentiating other members of the same family, but it is only by guinea-pig inoculation that the virulence of any particular organism can be determined.

Control Measures: In the event that diphtheria is discovered: (1) the individual cases should be isolated and promptly treated with antitoxin; (2) the immediate contacts (compartment mates, mess mates, etc.) should be closely watched, examined daily, and if the number concerned is small, given prophylactic doses of diphtheria antitoxin where practicable; (3) casual or group contacts should be watched for clinical signs of diphtheria; (4) personnel should be informed that diphtheria is present and that each man should report immediately to the sick bay if his throat is sore, if he has a cold or fever, or if he does not feel well; (5) any case of pharyngeal or tonsillar infection which is discovered among the contacts should be treated as clinical diphtheria until proved otherwise.

It is recognized that certain other aspects of diphtheria control are more or less controversial when used in connection with relatively small, probably segregated groups of adults. Schick testing, if done, must be performed carefully with potent testing material and the tests read at the end of 48 hours and 5 days. Otherwise the percentage of susceptibles will differ materially from the 40 to 45 per cent reported above. It is well known that the use of diphtheria toxoid as an immunizing agent for adults produces a relatively large number of untoward reactions. If it be deemed wise actively to immunize crew members, the Moloney test (0.1 c.c. of 1 - 100 dilution of toxoid intracutaneously) will serve to screen out those likely to have the more serious reactions. Passive immunization and cultures of immediate contacts and cultures and smears of suspicious cases are of value for those activities in which facilities and trained technicians are available. (J.W.H.)

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Tropical Ulcers, with Special Reference to their Treatment with Penicillin: Many reports to the Bureau from tropical areas emphasize the frequency with which tropical ulcers (or "desert sores") occur in these regions.

The tropical ulcer is undoubtedly not an etiological entity. Its occurrence often on exposed parts of the body - particularly the anterior surface of the leg or the dorsum of the foot - suggests that trauma may play an important role in its inception. These parts of the body are frequently abraded by

underbrush, rocks, etc., and are often the sites of bites by flies and other insects, which may be passive carriers of pathogenic organisms. Especially in the case of men whose legs are exposed to the sun, prolonged action of actinic rays may injure the skin and thereby lower its resistance.

The tropical ulcer is characterized by chronicity and resistance to efforts to effect healing. In this respect climate may play a role, continued dampness and excessive sweating tending to promote maceration. It has been observed that such ulcers tend to heal much more rapidly when the patient is removed from a tropical area.

The multiplicity of organisms held by different observers to be the causative agents further suggests that these bacteria represent pathogens or saprophytes which happen to find the local conditions favorable to their parasitic life.

Among the organisms commonly found are the pathogenic cocci, many of the usually saprophytic bacilli which frequently contaminate wounds, and the Vincent's organism. In certain areas of the tropics where the diphtheria bacillus is prevalent, secondary infection with this bacterium is common and the occurrence of palsies following such infection yields ample evidence that under these conditions it may elaborate its toxin and that this toxin may be absorbed.

The types of treatment recommended by different observers as specific for tropical ulcers are almost as numerous as the types of bacteria involved. Removal from a tropical climate is not always practicable. Refrigeration was mentioned in the Bumed News Letter of October 29, 1943. Wirtal reports in the March 1944 number of the Hospital Corps Quarterly excellent results with dichlorazodicarbonamidine (azochloramid). Arsenicals have been recommended in those secondarily infected by the Vincent's organism. Excellent results have been obtained in a limited number of cases with local applications of tyrothricin or gramicidin.

Some of the pathogens frequently found in these ulcers should be susceptible to the action of gramicidin and of penicillin. A recent letter from Dr. Rene Dubos states that the C. diphtheriae is gramicidin-susceptible, and Dr. Chester Keefer writes that it is penicillin-susceptible.

Penicillin is now widely distributed throughout the Navy. Its controlled experimental trial in the therapy of tropical ulcers would seem justified. Such experimental use should include in some cases parenteral administration and in others local application. For local therapy the continuous application of a solution containing 250 units to the cubic centimeter, trapped at the site where possible, would probably be the method of choice.

It would be helpful to combine such treatment with careful bacteriological studies. The effect of this drug in those ulcers in which virulent diphtheria bacilli are present might be ascertained. Its employment ought in no way to supplant the use of diphtheria antitoxin, which should be given to all such cases.

The influence of depletion of body protein on wound healing is recognized, and in those cases where tropical ulcers develop in the presence of malnutrition, proper attention must be given to the nutritive needs of the patient.

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Copper Sulphate Technic Adopted For Red Cross Hemoglobin Criteria: A modification of the Phillips et al. Copper Sulphate Technic for determining the specific gravity of whole blood (Bumed News Letter, June 25, 1943) has recently been adopted by the American Red Cross Blood Donor Service as an aid in establishing the acceptability of volunteer blood donors. In this modification, a drop of blood from the finger tip is drawn into a capillary tube (bore slightly less than 1 mm. and approximately 7.0 cm. in length) to which is attached a bulb such as is used with smallpox vaccine. The drop is then expelled into copper sulphate solution which has a specific gravity slightly above the minimum normal for each sex. This has been tentatively established as 1.053 (corresponding to 12.3 Gm. hemoglobin) for women and 1.056 (corresponding to 12.9 Gm. hemoglobin) for men. This simplified method does not actually determine the hemoglobin level but rather whether it exceeds the minimum normal limit; it protects the blood donor with far greater accuracy than the methods previously used.

This method has been in use in the Red Cross Blood Donor Center, Washington, D. C. since January 1944, and has been found to be superior to any other method for the rapid determination of donor acceptability. (E.L.L.)

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Role of Red Cross Blood Donor Service: An editorial in the New England Journal of Medicine, March 5, 1944, calls attention to the fact that a certain degree of confusion has continued to exist regarding the exact role of Red Cross Blood Donor Centers. Mr. Joseph R. Hamlen, Chairman of the Boston Red Cross Chapter, has issued a statement which should serve to remedy the confusion. He makes it clear that the blood is collected exclusively at the request of the United States Army and Navy. As Mr. Hamlen states:

"The blood at no time belongs to the Red Cross, but rather, from the moment it leaves the donor's veins, it is the property of the United States Army and Navy. The Red Cross is specifically forbidden from diverting the blood, except under direct orders of the Army and Navy. Under certain rare

circumstances, such as the Coconut Grove disaster or enemy bombing, this blood can be released, but only with the consent of the Army and Navy."

The Red Cross Blood Donor Service will, in the near future, furnish whole blood for transfusions to Army and Navy Hospitals in the vicinity of the 35 Red Cross Blood Donor Centers upon request from the commanding officer. A re-suspended red cell service (Group O only) will also be made available to Army and Navy Hospitals in certain localities. The details of these services will soon be announced. (L.R.N.)

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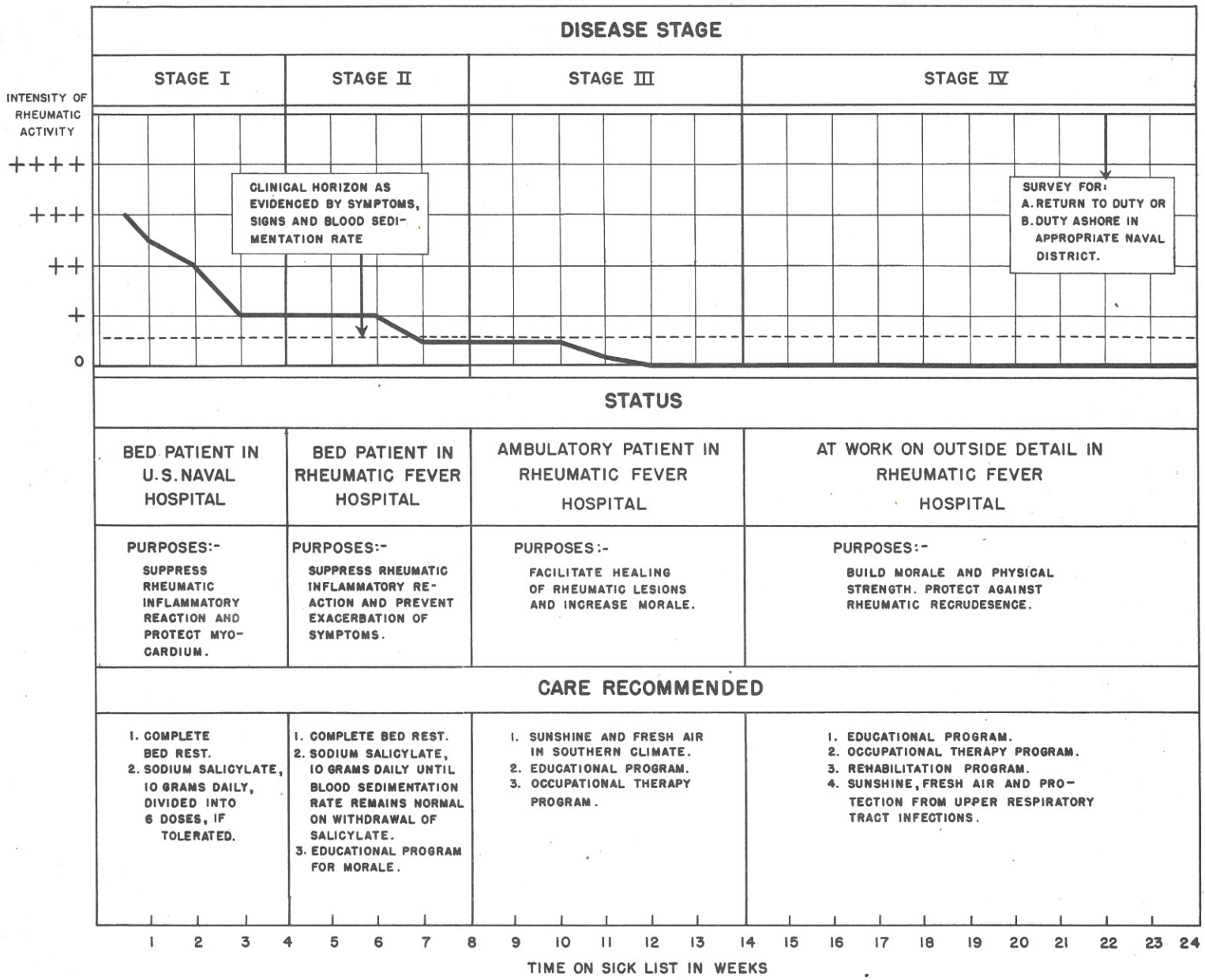
Plan for the Care of Patients with Rheumatic Fever: Corona Naval Hospital, Corona, California, has been designated a Rheumatic Fever Hospital. The advantages of this facility should afford opportunity to minimize the incidence of rheumatic heart disease in Naval and Marine Corps personnel (male and female) and to return to duty the maximum number of rheumatic patients. To be effective, the management of Naval personnel with rheumatic fever must be synchronized with the progress of cardiac lesions. It has been found convenient for this purpose to divide the rheumatic attack arbitrarily into the following four stages:

Stage 1: This is the period of acute illness during which the patient is subjected to multiple inflammatory reactions. The extent of the myocardial damage will depend on the number and location of these lesions in the heart. During the acute illness it is advised that each rheumatic patient be treated at a Naval Hospital with maximum bed rest and sodium salicylate. Unless there are contraindications, 1.6 Gm. of salicylate along with 0.6 Gm. of sodium bicarbonate, can be administered every four hours, day and night. This stage, in most instances, should be completed within one month. At this time patients should be symptom-free and should have a normal blood sedimentation rate while on this salicylate dosage. If the patient's heart is compensated, he should be transferred, preferably by air transport, to Corona Naval Hospital at the discretion of his commanding officer.

Stage 2: On arrival at the Rheumatic Fever Hospital, the patient should be considered subacutely ill. During this subacute stage of the disease, it is advised that he be given bed rest and maintained on sodium salicylate (10 Gm.) and sodium bicarbonate (4 Gm.) daily until the blood sedimentation rate has been normal for two weeks. After the blood sedimentation rate has been normal for two weeks, salicylate therapy can be discontinued abruptly. If, one week later, the patient is still free of symptoms and signs of rheumatic activity and the blood sedimentation rate remains normal, he should be considered to have progressed to stage 3.

A COMPOSITE SCHEDULE FOR HANDLING THE AVERAGE RHEUMATIC PATIENT



Bumed News Letter, Vol. 3, No. 9 RESTRICTED

Stage 3: This is a period of healing. Although the inflammatory process has subsided, recently damaged tissues must be repaired. The process of repair in the heart muscle is slow. To effect maximal repair with minimal loss of time, it is therefore essential that no great strain be placed on the myocardium during this period. A slowly progressive increase in physical activity is indicated. If, after four weeks, the patient manifests his ability to carry on light physical activities without symptoms or tachycardia and maintains a normal blood sedimentation rate, he should be considered to have progressed to stage 4.

Stage 4: At this point, the patient is considered to be free of active disease and the cardiac lesions, which developed during stage 1, to have healed. Every effort should be made during this stage to prepare the patient physically for return to duty. At the end of this stage he should be capable of performing all work consistent with his rate.

Disposition: At the appropriate time each patient's status should be reviewed by a Board of Medical Survey. One of three recommendations should be made at this time. If the patient has escaped all evidence of heart disease, it should be recommended "that he return to duty, fit for same." If the patient has stigmata of heart disease but has, nevertheless, progressed satisfactorily in stage 4, it should be recommended "that this man return to duty and be placed within the 6th, 7th, 10th, 11th, or 15th Naval District because of proved susceptibility to rheumatic fever." If the patient has manifested incapacitating heart disease and has been unable to advance beyond stage 3 after 6 months of convalescence, it should be assumed that his myocardial damage has been severe enough to preclude further naval service, and it should, therefore, be recommended "that he be discharged from the U. S. Navy." (A.F.C.)

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Uses of Tantalum in Surgery: Experiments have been carried out at the Naval Medical Research Institute designed to compare tantalum wire with other suture material used in peripheral nerve surgery in order to determine which are least irritative to nerve tissue.

Tantalum wire, white silk, black silk, cotton, nylon, human hair, plain and chromic catgut, and plastigut were obta ned in the finest available diameters and inserted into the intact sciatic nerves of rabbits. The animals were killed at 7, 21, and 42-day intervals, and the nerves removed for microscopic examination.

The sutures are divisible into three groups on the basis of the nature of the histological reaction - fibrous, fibrocellular and cellular. Nerve irritation was minimal (fibrous reaction) with tantalum, hair, nylon and plastigut sutures and maximal (cellular reaction) with plain and chromic catgut. The reaction produced by black silk, white silk and cotton was intermediate in grade, i.e., fibrocellular.

The histological reaction resulting from the use of hair, tantalum, nylon, and plastigut was qualitatively fibroblastic and quantitatively directly proportional to the suture diameters.

Black silk, white silk, and cotton caused a comparatively greater tissue reaction than the sutures in the fibrous group. In addition to fibroblasts, the histological reaction involved giant cells, small round cells and mononuclear phagocytes. There was penetration of these cells among the individual strands of the suture. White silk was found to undergo slow absorption in the tissues.

Plain and chromic catgut provoked an intense cellular reaction leading to destruction of neurones and endoneurial scarring. The reaction was equally intense with both types of catgut but appeared earlier with plain catgut.

Conclusions: 1. Suture materials used to unite divided peripheral nerves provoke a variable degree of tissue irritation.

2. This tissue reaction disturbs the nerve architecture and is a likely source of obstruction to downgrowing axones.

3. Non-absorbable sutures should be used. These materials should be obtained in the finest gauges consistent with desired tensile strength and ease of surgical manipulation. In addition, they should be swaged on atraumatic needles.

4. Hair, tantalum wire, nylon, and plastigut were the least irritative of the sutures used in this study.

5. Plain and chromic catgut should not be used for the epineurial suture of peripheral nerves. (N.M.R.I. Report X-133.)

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The addition to the Supply Catalog of tantalum wire and sheets is under consideration.

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Sulfonamide Hypersensitivity: Dowling and Lepper have presented some statistics regarding the phenomenon of fever occurring as a result of therapy with sulfonamides. Such "drug fevers" often appear between the seventh and tenth day of treatment, although they may occur at any time after treatment has begun. They are frequently accompanied by dermatitis with or without conjunctivitis.

The following table summarizes some of the data presented in their analysis. The first column represents the incidence of reactions with each drug during a second course of therapy with a sulfonamide which had been previously given. The second column represents the reactions with each drug during a course of therapy with a sulfonamide in patients who previously had received a different member of the series. The third column represents the incidence of febrile reactions in patients receiving their first course of sulfonamide therapy.

PATIENTS DEVELOPING FEVER DURING VARIOUS TYPES OF SULFONAMIDE ADMINISTRATION

	Previous Course of		
	Same Sulfonamide	Another Sulfonamide	No Previous Sulfonamide
Sulfathiazole			
Cases	53	89	172
Febrile Cases	9	5	14
% Febrile	16.7	5.6	8.1
Sulfadiazine			
Cases	68	57	371
Febrile Cases	5	1	16
% Febrile	7.4	1.8	4.3
Sulfapyridine			
Cases	22	23	194
Febrile Cases	2	0	7
% Febrile	9.1	0	3.6

These findings are of considerable interest in that (1) they confirm the general impression that reactions characterized by febrile, and frequently by dermatologic, manifestations of drug hypersensitivity are more common with sulfathiazole than with sulfadiazine, and (2) they suggest that in patients receiving sulfonamide therapy the incidence of this type of hypersensitive reaction is lower in those who have previously received another sulfonamide than in those who are receiving a sulfonamide for the first time. (Am. J. M. Sci., Mar. '44.)

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A Cutaneous Test for Hypersensitivity to Sulfonamides: Leftwich has described a method by which positive skin tests may be obtained in patients who have shown hypersensitive reactions to the sulfonamide drugs. The material used for the skin test consists of serum obtained from patients who are receiving a sulfonamide therapeutically and in which the drug level is between 2 and 25 mg. per 100 c.c. Five-tenths c.c. of this serum is injected intracutaneously, using a tuberculin syringe and a 26-gauge needle. As a control, the author uses serum obtained from the same donor before or some time after his course of sulfonamide.

The size of the wheal and the diameter of the erythema are measured immediately after injection and, at intervals of 5 minutes, for 20 minutes. Positive tests observed in patients definitely hypersensitive to one of the sulfonamides show an immediate increase in the size of the homologous wheal up to 12 to 18 mm. in diameter, with intense area of erythema 30 to 40 mm. in diameter, and, when the reaction is marked, the development of pseudopodia. The reaction is usually maximal in 15 minutes after the injection and is fading in 30 minutes, so that by the end of an hour and a half all traces of the wheal are gone.

The author used as a criterion for positivity a difference in diameter of at least 4 mm. between the size of the control wheal and that of the test wheal, rather than the absolute size of the test wheal.

Leftwich tested 30 patients who showed clinical evidence of hypersensitivity. The requirements for inclusion in this group were:

1. The occurrence of a rash, fever, or conjunctivitis in the course of sulfonamide therapy that was not related to the original disease or due to a secondary process.

2. Complete and permanent disappearance of the above signs upon cessation of the sulfonamide.

3. A time interval between the beginning of sulfonamide medication and the appearance of hypersensitive phenomena of at least 6 days, unless a history of previous administration of the drug was established.

Of the thirty hypersensitive patients, positive skin tests were obtained in 28. The test was positive in only one of 8 patients who were thought clinically to be questionably sensitive. Among a group of 26 patients in whom no hypersensitive phenomena were observed clinically, 24 gave negative skin tests and 2 showed positive skin reactions. The 2 who showed positive reactions had received the sulfonamide longer than 6 days.

Twenty-five patients hypersensitive to a sulfonamide were tested with a sulfonamide other than the one they had been receiving. Only three were found to have positive reactions.

Leftwich draws the following conclusions: "The fact that positive skin tests may so consistently be obtained in hypersensitive individuals is additional evidence that drug hypersensitivity is an allergic reaction. The sensitizing antigen may be a sulfonamide-plasma protein combination which is formed in vivo in the circulating blood of patients during sulfonamide therapy, the sulfonamide perhaps acting as a haptene. The failure in this series of two patients who developed hepatitis and one patient who developed hemolytic anemia as a result of sulfonamide therapy to show positive skin reactions to the homologous sulfonamide, supports the belief that these latter reactions are due to direct toxic action of the sulfonamide rather than to hypersensitivity." (Bull. Johns Hopkins Hosp., Jan. '44.)

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Mumps - Meningitis and Orchitis: Two papers on mumps appear in the April issue of the Naval Medical Bulletin.

In one, Candel et al. call attention to the frequency with which the nervous system is involved in mumps. They performed routine spinal punctures on a series of patients with mumps. Among 14 cases of parotitis without clinical evidences of complication, 50 per cent had more than 10 cells per cu. mm. in the cerebrospinal fluid. (Only one complained of headache.) Among 14 cases of mumps complicated by orchitis but presenting no signs of meningitis, 100 per cent had 10 or more cells in the spinal fluid.

Among the cases which they classify as mumps meningitis, the authors describe three types. The first group presented the classical symptoms and signs of meningitis - stiff neck, fever, and high cell count in the cerebrospinal fluid. The second group showed no clinical signs of meningitis but merely a sudden elevation of temperature appearing after an afebrile period and associated with an increase in the cellular contents of the spinal fluid. The third group was characterized only by the presence of low grade fever beginning often on the seventh day and continuing through about the tenth day and accompanied by a pleocytosis.

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Rambar, in the second paper, reports two cases of mumps orchitis in which the testicular inflammation subsided promptly after the administration of one unit of pooled normal plasma. Rambar's case reports follow:

Case 1: A young man, 19 years of age, developed orchitis involving the left testicle on the 5th day after onset of mumps. At that time his temperature was 104°F. The temperature fluctuated between 101° and 103° F. for the next three days and the testicle increased in size. On the 8th day the

patient had a chill with a rise of temperature to 105°F. at which time the right testicle became grossly swollen and tender. One unit (250 c.c.) of plasma was administered intravenously. In 2 hours the temperature had dropped to 102°F. and in 8 hours it was normal and remained so. The left testicle which was originally involved became atrophic, but the pain and swelling in the right testicle subsided within 24 hours.

Case 2: A patient, 21 years of age, ill with mumps, developed unilateral orchitis on the 4th day of the disease, with a temperature of 104°F. He was immediately given 1 unit of plasma intravenously, and within 24 hours his temperature had dropped to normal, with a rapid subsidence of the pain and swelling. There were no further sequelae.

This form of therapy deserves critical trial in a larger series of cases.

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Removal of Fuel Oil from Health Records: In experiments conducted at the Naval Medical Research Institute by Lt. W. V. Consolazio H-V(S), USNR, it has been found that chloroform, carbon tetrachloride, propylene dichloride and xylol remove fuel oil from health records without apparent damage to the written, typed or printed material, or to the paper itself. Chloroform appears to be the best.

The technic used is similar to that employed in the development of photographic films in trays. The record is washed for several minutes in two successive baths of the solvent and then immersed a few seconds in acetone for rapid drying.

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Blood Pressure and Pulse Response to Plasma Transfusion: An analysis of systolic blood pressure recordings before and after 392 plasma transfusions and of pulse rate recordings before and after 513 plasma transfusions in patients suffering on the one hand from shock due to hemorrhage or shock without hemorrhage and on the other from hypoproteinemia, has been reported by the Naval Medical Research Institute (Final Report, Project X-179).

The patients studied all had systolic blood pressures under 100 mm. Hg. and pulses over 100. The average increase in systolic blood pressure produced by plasma administered over a period not exceeding 24 hours to patients in shock was 28 mm. Hg. In the patients with hypoproteinemia it was 14 mm. Hg. The average decrease in pulse rate was 13 beats per minute in patients in shock and 6 per minute in patients with hypoproteinemia.

In general, the increase in systolic pressure in mm. Hg. was more striking than the decrease in pulse in beats per minute. Thus, although the hypotension

may have been relieved, tachycardia frequently persisted. The persistence of the tachycardia may be the result of anemia, and it is probable that the persistent tachycardia might have been less had whole blood transfusions been given (Bumed News Letter, March 17, 1944), although no comparable data are now available on this point. (E.L.L.)

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Locating Retained Roots and Foci of Infection: The April 1944 issue of "Dentistry, A Digest of Practice" contains a description of a simple procedure for locating retained roots or areas of infection. Pins placed vertically at specific points on the films and horizontal markings made with an indelible pencil on the ridge serve as accurate landmarks for subsequent measurement in determining the exact location of the retained root or focus of infection. Pins are inserted in 10 films for a full-mouth examination to serve as landmarks.

(1) For anterior regions, insert a pin in the center of a vertical film. (2) For canine or premolar regions, insert a pin along the mesial edge of a vertical film. (3) For molar regions insert a pin along the mesial edge of a horizontal film.

In the incisor region the film is placed vertically with the pin directly behind the median line. In the canine and premolar regions the film is placed vertically with the pin, lingual to the cuspid prominence, the corner of the mouth, or whatever landmark has been selected. In the molar region select a muscle attachment for a landmark and place the film horizontally with the pin lingual to the most prominent muscle attachment. Expose and process films in the usual manner.

If a root or lesion is revealed in the X-ray, measure the distance on the X-ray from the image of the pin to the lesion. Make a vertical mark with an indelible pencil the same distance from the landmark as was measured on the X-ray. Measure the distance from the alveolar crest to the lesion noted on the X-ray film and make a horizontal mark the same distance from the crest of the ridge. The point at which the vertical and horizontal lines cross indicates the approximate location of the root or focus of infection. (Location of Retained Roots and Foci of Infection in Edentulous Jaws, Herman Meyers, D.D.S., condensed from the Dental Digest; T.V.J.)

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Care of Dental Handpieces: The following suggestion may assist in minimizing angle handpiece difficulties: Carbon steel has been employed in the making of angle handpieces to facilitate production and to meet increased demands. Since angle handpieces made from this material corrode more readily than those made from stainless steel, greater care must now be

exercised in their use. The examination of many angle handpieces indicates that one of the reasons for unserviceability is lack of adequate care. It is recommended that all angle handpieces be cleaned daily by running in kerosene, followed by proper lubrication. (Bull. U. S. Army M. Dept., Jan. '44.)

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Hot Weather and X-Ray Films: The following item taken from the April 1944 issue of "Dentistry, A Digest of Practice" may be followed as a useful suggestion: Hot weather or warm solutions soften the surface of X-ray films, often resulting in reticulation or blistering. The film can be hardened and these dark-room troubles prevented by dipping the film into 10 per cent formalin and then into water before processing. Treating films in this way will not affect development. (T.V.J.)

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Return of Empty Colloidal Gold Bottles: Colloidal Gold Solution for the Lange test is obtained from Medical Officer in Command, Naval Medical School, National Naval Medical Center, Bethesda 14, Maryland, upon letter request.

The containers used for this reagent are one and two liter Pyrex, glass-stoppered bottles. They are accompanied by 60 and 120 ml. Pyrex, glass-stoppered bottles containing acid with which to adjust the alkaline gold.

These containers are not only expensive but very scarce; also, the consumption of this reagent by the Service has greatly increased. These two factors make it necessary that all activities make every effort to return these containers when empty. (This is applicable to overseas activities when shipping space is available.) Bottles with broken or lost glass stoppers are to be returned also, as all containers are of the Standard Taper type and the stoppers can be replaced.

Cooperation in this matter will insure an adequate supply of containers and reduce considerably the overall cost of this reagent. (P.W.W.)

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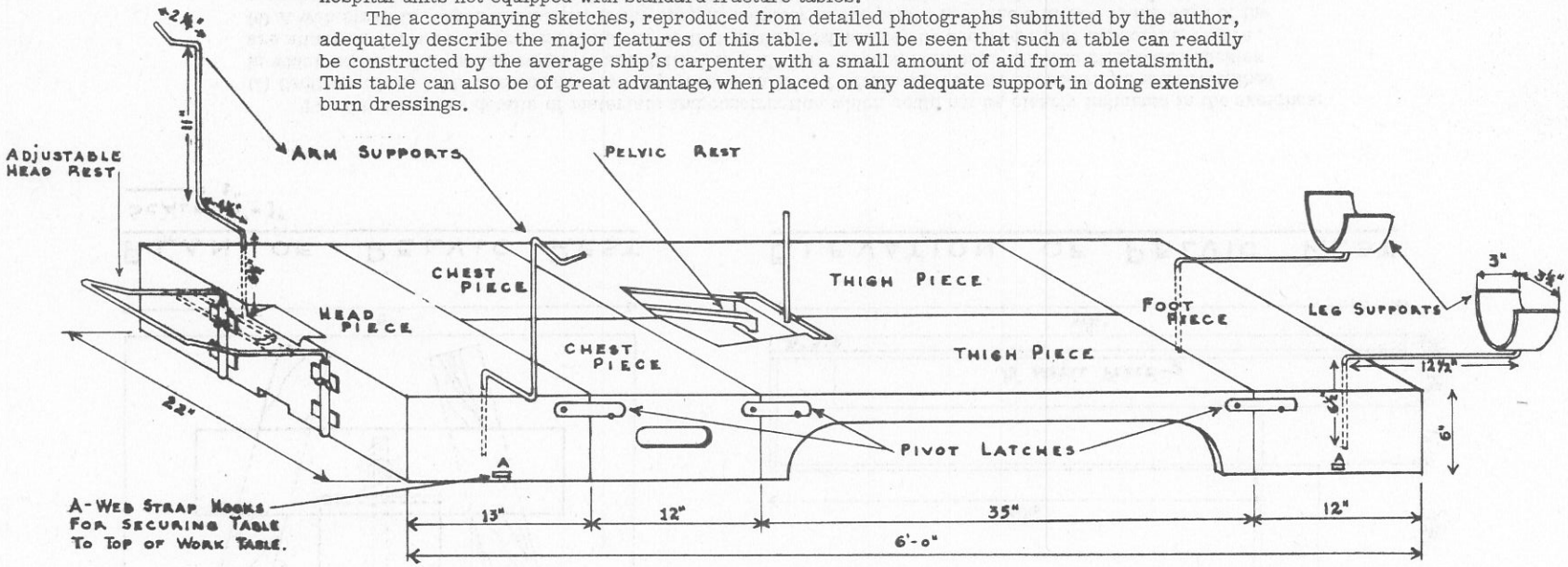
Erratum: On Page 2 of the April 14, 1944, issue of the Bumed News Letter, the impression is given in the second paragraph that three of the patients treated at the Naval Hospital at Bethesda with penicillin for syphilis developed mild exfoliative dermatitis. The sentence should have read: "Among all of the patients with syphilis treated by penicillin reported at this meeting, two developed mild exfoliative dermatitis." This skin complication was not present in any of the cases at the Naval Hospital.

Portable, Simply-Constructed Plaster Table for Ship and Advanced Base Use: Lt. Comdr. H.E. Hipps (MC), USNR, U. S. Naval Hospital, Corpus Christi, Texas, has designed a portable fracture table which is extremely simple in construction and appears practical for use on ships and at advance hospital units not equipped with standard fracture tables.

The accompanying sketches, reproduced from detailed photographs submitted by the author, adequately describe the major features of this table. It will be seen that such a table can readily be constructed by the average ship's carpenter with a small amount of aid from a metalsmith. This table can also be of great advantage, when placed on any adequate support, in doing extensive burn dressings.



ISOMETRIC VIEW OF PLASTER TABLE

SCALE 1/8" = 1"

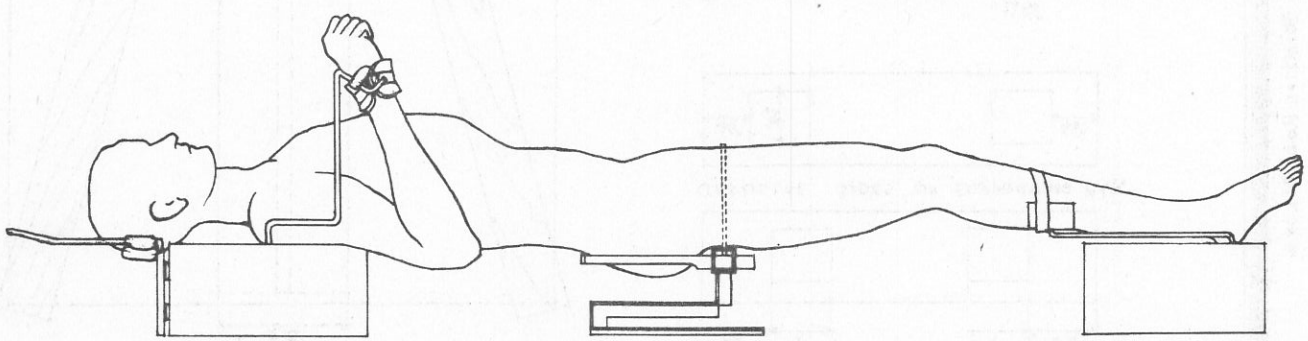
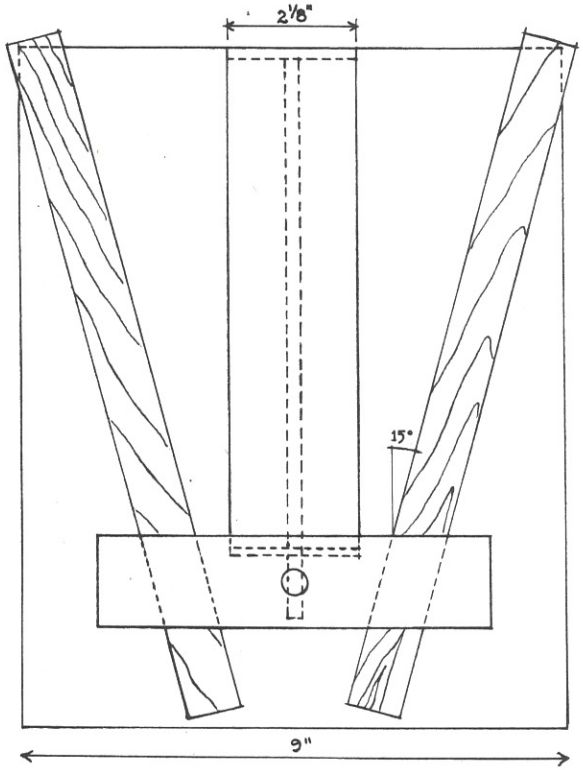
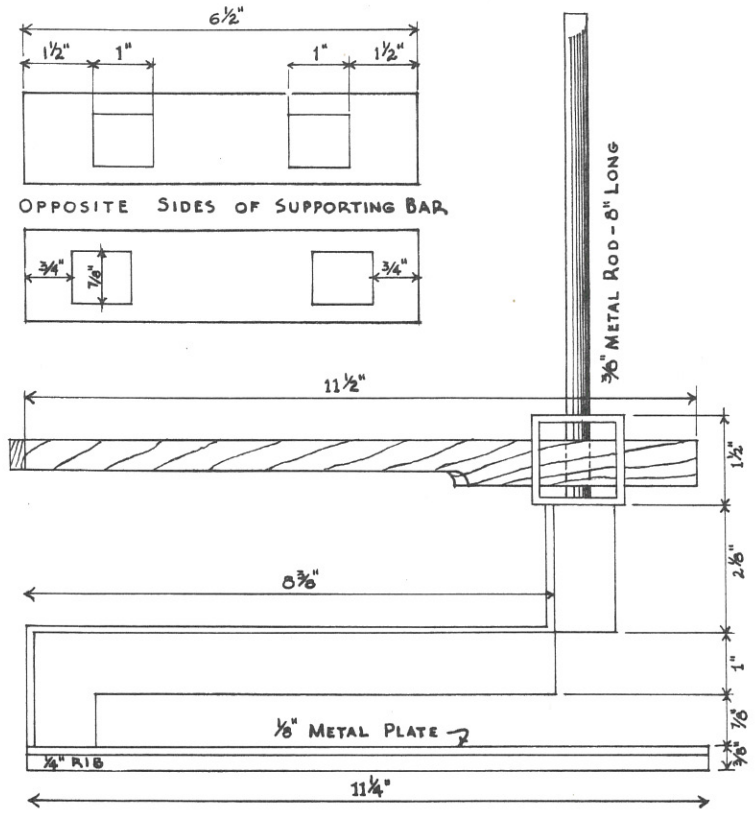


DIAGRAM SHOWING CHEST AND THIGH PIECES REMOVED AND PELVIC REST IN POSITION



PLAN OF PELVIC REST

SCALE ½"-1"
—— = 1"



ELEVATION OF PELVIC REST

The following are details of materials and construction which could not be clearly indicated in the sketches: (1) Sections of the table are constructed of plyboard on 2" x 2" frames. (2) The cross-frame of the footpiece in which sockets for the leg supports are drilled is a 2" x 4" wooden member. (3) Web straps and buckles are attached to the headpiece and footpiece so that these sections may be secured to the supporting table. (4) A web strap is looped around the lower upright member of the pelvic rest and attached to the edge of the supporting table by means of a simple metal hook. (5) The pelvic rest is made of steel except for the sacral sticks which are made of wood so as not to interfere with an X-ray view through this area. These sticks slide through holes cut in the square steel tubing cross-member of the pelvic rest and thus the size of the area on which the sacrum rests may be varied.

Potency Period of Typhoid Vaccine, Combined, (Stock No. S1-2240): All typhoid vaccine is procured by Naval Medical Supply Depot, Brooklyn, from the Army Medical Center, Washington, D. C., and, according to the labels on the individual containers, possesses a potency period of twelve months. A recent communication from the Army Medical Center assures us that it is entirely safe to employ this vaccine for immunization purposes for eighteen (18) months from the date of manufacture. (N.M.S.D. News Letter, April '44.)

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Storage of Biological Products: It has been reported by the National Institute of Health and by the contractors that Tetanus Toxoid, Alum Precipitated, should not be allowed to freeze. In this connection the following information is quoted from a recent letter from the National Institute of Health:

"This will acknowledge your letter of March 1, 1944, relative to the storage of tetanus toxoid.

"It seems clear to us from the various communications attached to your letter that the vials of toxoid in question were frozen. We feel sure that such treatment would so disturb the physical characteristics of the alum precipitated tetanus toxoid that after thawing it would not go into the same smooth suspension as normally occurs. While we have no evidence that freezing a toxoid renders it toxic or less antigenic, we are of the opinion that this type of treatment should not occur since there is this disturbance in its physical characteristics.

"The directions which the National Institute of Health issued relative to dating and storage of biologics are as follows:

'Unless otherwise specifically provided, the outside label shall bear the following statement: "Keep preferably at 2° to 10°C. (35.6° to 50°F.)." '

"As this statement indicates, where these temperatures are not suitable, specific temperatures are provided for the particular product in question. We regard that storage at temperatures lower than the above for many products is just as undesirable as storage at temperatures exceeding these limits.

Respectfully,

/s/ M. V. VELDEE, Chief
Biologics Control Laboratory"

(N.M.S.D. News Letter, April '44.)

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Reports on Research Projects at the Naval Medical Research Institute Available to Medical Officers:

X-218 Comparison of Rates of Dark Adaptation under Red Illumination and in Total Darkness.
Conclusion: No measurable accelerating action was found to result from exposure to red light. Thresholds obtained after red light exposure are on the average higher than, or equal to, the corresponding thresholds following exposure to complete darkness.

X-220 "Micraform" Sulfathiazole as an Aid in the Treatment of Paradentosis (Pyorrhea Alveolaris).
Conclusion: Medication with micraform sulfathiazole produced no better results than the usual methods of treatment.

X-276 A Test of Plastic Inserts for Aviator's Goggles (TED No. UNL-2544). Conclusion: It is concluded that the plastic insert performs satisfactorily the function for which it was intended in that it affords considerable protection from injuries which might occur if the glass lenses were violently shattered by missiles.

X-297 Blood Flow Through the Extremities at Low Temperatures and Its Possible Relation to Immersion Foot, Report #1.
Conclusion: It is concluded that blood flow through extremities is greater at very low skin temperatures than it is at more moderate skin temperatures. It would seem, therefore, that factors other than ischemia contribute to the development of immersion foot.

X-195 Investigation of Detergents for Removal of Fuel Oils. See abstract in Bumed News Letter, March 17, 1944.

X-280 Tests of Self-Heating Food Cans.
Conclusions: "Hotcan" foods are valueless below freezing temperatures because the water sealed in the double bottom of the container freezes and no heating reaction occurs. In fact, at 32°F. the heating reaction is not sufficient to heat the food beyond the tepid or lukewarm state.

The bulk and weight of the container and heat-producing chemicals make this device impractical for use in most types of aircraft.

X-249 Physiological Appraisal of MSA Rebreather Employing Experimental Models of Pump Type Autovent Devices: Types II and III D.
Conclusion: It may be concluded that the pump-type autovent functions satisfactorily to prevent excess pressure in the breathing bag and effects a moderate degree of nitrogen elimination. The total

physiological performance of the rebreather as modified by the autovents is, however, not appreciably altered.

X-133 Uses of Tantalum in Surgery. I. A Comparison of Tantalum Wire with Other Materials for Nerve Suture, Report #1. See abstract in this issue.

X-110 Sterilization of Individual Water Supplies (Canteens). I. Chemical, Bactericidal and Amebicidal Tests on Single Operation, Individual Superchlorinating-dechlorinating Units, Report #1.
Conclusion: Certain features of the present CDC units strongly recommend them for military field service - they are superbly packaged and the chlorinating reagent selected (Halazone powder) is conceded to be the best available. They are probably the best single operation units available at this time for the sterilization of canteen water.

X-286 Proposed Field Uniform for Hospital Corpsmen.
Conclusion: It has been found possible to provide the two-piece Marine Corps utility uniform with the necessary pockets for the items of the Field Medical Unit #3 in a manner which will provide ready access to any particular item without disturbance of other items and with minimal impedance to the hospital corpsman's movement.

X-281 The Application of Recent Developments in X-Ray Diffraction Technic to Chemical Analysis.
Conclusion: The technic should be useful for the rapid identification of a wide variety of solid substances, especially if used in conjunction with other chemical procedures.

X-295 Nutritional Status of Enlisted Wave Personnel in the Washington Area, Report #1.
Conclusion: An examination of Wave personnel in the Washington area did not reveal clinical evidence of nutritional deficiencies.

X-108 Specifications for Sunburn Preventive Cream (a) for Use in Life Raft Emergency Equipment, and (b) for General Use.

X-221 Investigation of Mildew in Mattresses when Encased in Bedding Bags and Exposed to Tropical Weather Conditions - Remedial Measures, Report #1.
Conclusion: Samples of hair matting (1/3 horse mane and tail or cattle tail, and 2/3 pig hair, and horse or cattle hair clippings) were resistant to damage by fungi when exposed to: (1) soil burial

test, (2) suspension in air in a high humidity and temperature room, and (3) culture tests with mixed organisms. From the results of these tests, hair, therefore, appears to be a mattress filling that will tend to decrease the amount of mildew.

NMRI-43 Thiamine Chloride (Ingested) as a Mosquito Bite Preventive. See abstract in Bumed News Letter, April 14, 1944.

NMRI-44 Report on Physiological Criteria for the Engineering and Development of Bail-Out Oxygen Equipment.

NMRI-46 Report on Aperture Method of Stating Oxygen Mask Leakage. Summary: Mask leakage can be stated in terms of apertures. An equation for calculating the size of the aperture is given. The advantages of expressing leakage by the aperture method, however, are not apparent.

NMRI-57 Report on the Effect of Hypothermia on Dog Filariasis. Conclusion: It is unlikely that lowering the body temperature of an animal with filariasis will have any significant effect on the course of the disease.

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Public Health Foreign Report:

Disease	Place	Date	Number of Cases
Dengue Fever	Honolulu, T. H. (T.H., U.S.A.)	Feb. 1-15, '44	37
Plague	Egypt - Suez	Jan. 29-Feb. 5, '44	12 (4 fatal)
		Feb. 5-12, '44	5 (2 fatal)
		Feb. 12-19, '44	3 (2 fatal)
		Feb. 19-26, '44	6 (2 fatal)
	Hawaii, (T.H., U.S.A.)	Jan. 19-Feb. 10, '44	3 (fatal)
	Madagascar	Jan.-Mar. '44	124 (110 fatal)
		Apr.-June '43	21 (19 fatal)
		July-Sept. '43	13 (13 fatal)
		Oct.-Dec. '43	76 (67 fatal)
	Morocco	November '43	45
		January '44	1 (1 fatal)
		Feb. 1-10, '44	1
	Peru	December '43	22 (4 fatal)
Smallpox	Algeria	Jan. 21-31, '44	68
	Belgian Congo	Dec. 11, '43-Jan. 27, '44	587
	Egypt - Port Said	Jan. 29-Feb. 5, '44	28 (3 fatal)

Public Health Foreign Report (Cont.):

Disease	Place	Date	Number of Cases
Smallpox	Egypt - Port Said	Feb. 5-12, '44	64 (2 fatal)
	Suez	Feb. 19-26, '44	18 (2 fatal)
	Greece	October '43	194
		November '43	173
		December '43	82
	India - Bombay	Jan. 28-Feb. 5, '44	192 (55 fatal)
		Feb. 5-12, '44	223 (102 fatal)
	Calcutta	Jan. 22-29, '44	157
		Jan. 29-Feb. 5, '44	230
		Feb. 5-12, '44	254
	Indochina	Jan. 10-20, '44	147
		Jan. 21-31, '44	48
	Mexico - Torreon	Feb. 12-19, '44	11
		Feb. 19-26, '44	17
	Sudan	Jan. 11-20, '44	165 (14 fatal)
	Turkey	December '43	1,488
Typhus Fever	Algeria	Feb. 12-19, '44	41
	Bulgaria	Jan. 6-19, '44	80
	Ecuador	Dec. 16-31, '43	8 (3 fatal)
	Greece	October '43	21
	Guatemala	November '43	19
		December '43	29
	Hungary	January '44	155 (27 fatal)
		Feb. 5-19, '44	121
	Mexico	Jan. 1-15, '44	40
	Netherlands	Jan. 1-22, '44	5
		Jan. 22-29, '44	2
	Rumania	Feb. 8-15, '44	644
	Spain	Jan. 15-22, '44	8
	Tunisia	Jan. 21-31, '44	19
	Union So. Africa	March '44	282
Yellow Fever	Brazil	Dec. 21, '43	1 (fatal)
		Jan. 2, '44	1 (fatal)
		Jan. 15, '44	1 (fatal)
		Jan. 19, '44	1 (fatal)

(Pub. Health Rep., Mar. 10, 17 & 24, '44.)

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ALNAV

22 Mar 1944

Accordance act 26 February 1944, members Navy Nurse Corps during present war and 6 months thereafter designated by commissioned rank corresponding present relative rank. New oath of office not required to effect change in status. No change in existing instructions relating authority, manner appointment, service for longevity, or pay status members Navy Nurse Corps.

--SecNav. James Forrestal.

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CIRCULAR LETTER NO. 97-44

To: All Ships and Stations. Pers-34-RT
A2-3

Subj: Changes in U. S. Navy Uniform Regulations, 1941. 31 Mar 1944

Refs: (a) U. S. Navy Uniform Regulations, 1941.
(b) BuPers ltr Pers-O-AC, A2-3, of 2 Jan 1943 (All Ships and Stations Letters--Jan-June 1943, p. 267), corrected by BuPers Circ. Ltr 51-43, of 10 Apr 1943 (All Ships and Stations Letters--Jan-June 1943, p. 337).

1. The Secretary of the Navy has approved a miniature chief-petty-officer cap device approximately three-fourths the size of the present cap device, and that part of paragraph 1 of reference (b) pertaining to chief petty officers will be changed to read as follows:

"Chief petty officers shall wear a miniature chief petty officer cap device on the left side of the cap, 2 inches from the front edge."

2. The following change has been approved by the Secretary of the Navy:

Undress jumpers be shortened 4 inches and hang straight.
Dress jumpers be shortened 6 inches and hang straight.
Hems on both jumpers be 2-1/2 inches to provide material for tall men.

In view of the above it is directed that article 5-30 be changed to read as follows:

"5-30. Jumper, Blue, Dress.--This garment shall be of blue cloth, loose, square sailor collar, trimmed with three stripes of white tape on the edge, and shall have a machine-made white star in each lower corner. It shall be open in the neck and finished at the bottom with turn-up hem. The jumper shall hang straight and will fully cover the top of the trousers."

Note: During the necessary transition period men will be permitted to wear the draw-string type jumpers until the supply of these jumpers in stock is exhausted or those in possession are worn out.

3. The following changes have been approved by the Secretary of the Navy and reference (a) will be corrected as follows:

Art. 1-20. Change to read as follows:

"1-20 Naval Personnel Serving With The Marine Forces.

"Naval officers attached to Marine Corps organizations may wear the field uniform prescribed for officers of the Marine Corps. If the Marine Corps field uniform is worn, the following regulations are prescribed:

"(a) Commissioned officers of the line shall wear their miniature cap device, bronzed, on the visor cap; their miniature cap device, bronzed, on the left side and rank pin on the right side of the garrison cap; Marine Corps rank pin (of equivalent rank) on the coat shoulders, and rank pins on each shirt collar tip.

"(b) Commissioned officers of the staff shall wear the same insignia as officers of the line except that the pin-on corps device shall replace the rank pin on the left collar tip of the shirt.

"(c) Chief warrant officers shall wear their miniature cap device, bronzed, on the visor cap; their miniature cap device, bronzed, on the left side and their corps device on the right side of the garrison cap; their corps device on the coat shoulders, and on each shirt collar tip.

"(d) Warrant officers shall wear their cap device, bronzed, on the visor cap; their corps device on each side of the garrison cap, on their coat shoulders, and on each shirt collar tip."

"Enlisted men of the Navy attached to Marine Corps organizations shall wear, when directed by the commanding officer, and when uniforms are furnished at no expense to the enlisted men, the field uniform prescribed for enlisted men of the Marine Corps, except that all enlisted ratings shall wear naval rating badges and distinguishing marks with blue markings (except for the red cross for Hospital Corpsmen) on a background to match the color of the uniform. Chief petty officers shall wear their miniature cap device, bronzed, on the visor cap and on the left side of the garrison cap."

Art. 11-37. Change to read as follows:

"11-37. Dungaree Trousers.--These trousers shall be made of the same material as the jumper, fly front with blue buttons, fitted with belt loops to take black belt, two slash side pockets and two patch back pockets."

Add new article 11-41 as follows:

"11-41. Chief cooks and chief stewards and cooks and stewards shall wear the working uniform prescribed for chief petty officers, with the following exceptions:

"Buttons shall be blue-black plastic, anchor design, 30 line.

"Tie shall be the regulation black bow tie.

"Cap shall be the regular combination cap prescribed for chief cooks and chief stewards and cooks and stewards, except that the cloth top shall match the color of the uniform, with the prescribed cap device.

"Insignia of rating shall be the same as now prescribed for chief cooks and chief stewards and cooks and stewards and shall be blue markings on a background to match the color of the uniform." --BuPers. L. E. Denfeld.

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To: All Ships and Stations.

BUMED-H-3-CRE
P2-5/P3-1(103-51)
Pers-423g
P11-1
22 Mar 1944

Subj: Radium Plaque Adaptometer (Night Vision): Distribution; Training Q RPA Operators; Testing Naval Personnel; Instructions and Program With Respect to.

Ref: (a) VCNO ltr to BuPers-BuMed, Op-23-1-BH, (SC) P2-3 over serial: 0287923 dated 14 July 1943.

Encl: 1. Sample form to be used for reporting night vision tests.
2. Revised Instructions for Operation and Maintenance, Radium Plaque Adaptometer, 6 March 1944.
3. Sample form for reporting Q RPA Op.

1. For the convenience of all concerned, previous joint communications on subject from BuPers-BuMed are herein summarized, modified, and elaborated.

2. Continued study of subject instrument and technics of testing indicates that training in the use of, and testing with, subject instrument is a matter involving professional knowledge and should therefore be carried out under the cognizance of Medical Department personnel.

3. Previous instructions placing training of Hospital Corps personnel under the supervision of directors of training are hereby canceled, and such training made the responsibility of the DMO of the several naval districts or SMO of fleet commands.

4. The testing of all naval personnel with the radium plaque adaptometer will be conducted under the direction of the DMO of the several naval districts and commands, and the SMO of all fleet commands, and will be performed only by Hospital Corps personnel certified as qualified radium plaque adaptometer operators (Q RPA Op).

5. Activities which have received radium plaque adaptometers are hereby directed to cease testing night vision with the radium plaque adaptometer until Q RPA Op are assigned in the future or trained at such activity, when testing will proceed without specific authorization.

6. Radium plaque adaptometers will be distributed by the Medical Supply Depot, Brooklyn, as follows:

One adaptometer to each of the following type ships now in commission or when commissioned: BB, CB, CA, CL, CV, CVE (ACV), AD, AE, AF, AH, AK, AKA, AO, AP, APA, APH, AS, and AV.

One adaptometer to each of the following shore based activities, now established or to be established, continental and extracontinental: Submarine bases, night lookout training tables, amphibious training bases, naval operating bases, naval air stations, naval hospitals, mobile hospitals, advanced base hospitals, dispensaries, or other Medical Department facilities of fifty (50) bed capacity or larger outside the continental limits of the United States.

DD's and PT tenders.

All operational training bases and schools and armed guard schools.

Individual requests for radium plaque adaptometers need not be made by activities covered by the above distribution list.

7. It is desired that districts continue to operate programs for training Q RPA Op, if such have been established, and undertake training within the district if programs in accordance with the principles of this letter can be established in the future.

8. It is directed that all instructions concerning the use of the radium plaque adaptometer, and method of performing tests and scoring, on hand at the date of this letter, be destroyed. Testing and scoring instructions subsequently received will also be destroyed unless marked "Revised Instructions, 6 March 1944" or later date.

9. Technic of testing and method of scoring will hereafter follow instructions contained in enclosure (2), which supersedes all previous instructions on testing technic and scoring and grading procedures.

10. All testing will be based upon the so-called "10-20" technic. Pharmacist RPA technicians attached to districts and commands for subject purpose have been trained in this procedure, and detailed instructions will be found in the revised "Instructions for Operation and Maintenance--Radium Plaque Adaptometer, 6 March 1944".

11. Entries as "Pass" or "Fail" will be made in the health record and service record of each officer and man tested. Such entries will be made by the local activity. The senior Q RPA Op will report (enclosure 1) as "Pass" or "Fail", in the instance of each officer and man tested, to (1) the line officer having cognizance of service records, and (2) the senior medical officer, of the activity where night vision tests are performed.

12. Pharmacist RPA technicians will be ordered to ComSerForSubComLant, ComSerForSubComPac, CinCPac, and CinCLant for subject purpose.

13. Pharmacist RPA technicians attached to COTCLant, ComPhibTraLant, ComSubLant, ComAirLant, COTCPac, ComPhibTraPac, ComSubPac, and

ComAirPac will be ordered to serve as Instructors in subject at the following naval hospitals:

U. S. Naval Hospital, St. Albans, New York.
U. S. Naval Hospital, N. O. B., Norfolk, Virginia.
U. S. Naval Hospital, Charleston, South Carolina.
U. S. Naval Hospital, San Diego, California.
U. S. Naval Hospital, Treasure Island, San Francisco, California.
U. S. Naval Hospital, New Orleans, Louisiana.
U. S. Naval Hospital, Great Lakes, Illinois.

14. Selected Hospital Corps personnel will receive approximately 10 days' instruction in subject, and medical officers in command, upon completion of such training, will indicate such special qualification on NavMed Form HC-3 as "Q RPA Op."

15. District commandants having cognizance over the naval hospitals listed in paragraph 13 are requested to direct the pharmacist RPA technicians attached to the district to select Hospital Corps personnel from among hospital corpsmen attached to naval hospitals and other Medical Department activities within the respective districts, for subject training course.

16. Hospital Corps personnel selected for subject training will not be above the rating of pharmacist's mate, second class, and will not be qualified technicians in any of the Hospital Corps specialties.

17. It is desired that classes of 40 hospital corpsmen per hospital listed in paragraph 13 be selected for each class and ordered to report at 10-day intervals for subject training.

18. Commandants are requested to accept the recommendations of pharmacist RPA technicians with respect to Hospital Corps personnel selected as described in paragraphs 16 and 17 above, and to place such personnel under appropriate orders (forwarding copy of such orders to BuMed) for training at the U. S. naval hospital in their district. Classes No. 1 and No. 2 will report for training on or about 20 April 1944 and 30 April 1944, and subsequent classes will continue at the rate of 40 hospital corpsmen per class per naval hospital (see paragraph 13) until further notice.

19. Medical officers in command of the naval hospitals listed in paragraph 13 are directed to arrange, upon the recommendation of the pharmacist RPA technician of that district, (1) necessary dark-room facilities (see enclosure (2), paragraph A(1), page 4), and (2) sufficient (50 to 100 men per operator) experimental subjects to facilitate the training of Hospital Corps personnel to qualify them as Q RPA Op.

20. The Naval Medical Supply Depot is hereby authorized and directed to deliver ten (10) radium plaque adaptometers to each of the naval hospitals listed in paragraph 13 above. (Copy of invoice, indicating serial numbers of adaptometers, to be forwarded to district commandant and Materiel Division, BuMed.)

21. Commandants of the Tenth, Fourteenth, and Fifteenth Naval Districts are requested to direct pharmacist RPA technicians to continue training of hospital corpsmen as Q RPA Op and the subsequent testing of night vision of naval personnel under the command to which they are assigned.

22. It is recommended that the appropriate medical officer of the U. S. Coast Guard designate 20 pharmacist's mates (U. S. C. G.) for subject training, at the nearest naval hospital listed in paragraph 13 above for Classes No. 2 and No. 4. (See paragraphs 13, 14, 17, and 18.)

23. Pharmacist RPA technicians will promptly forward to BuMed, copy to DMO (or SMO of fleet commands), reports on all Q RPA Op as soon as qualified for duty (enclosure 3).

24. Hospital Corps personnel attached to Marine Corps activities will be selected and trained as provided for in paragraphs 15, 16, 17, and 18 above, as directed by commandants.

25. Commanding officers will enter on page 9 of the current service record of each hospital corpsman reported qualified, as provided for in paragraph (23) above, the term "Qualified Radium Plaque Adaptometer Operator" (Q RPA Op).

26. BuPers, on recommendation of BuMed, will make available to commandants of continental naval districts and to ComSerForSubComLant and ComSerForSubComPac, for further assignment, Q RPA Op as rapidly as possible.

27. District activities requiring Q RPA Op will request such personnel from their respective district commandants, and fleet activities will request Q RPA Op from ComSerForSubComLant and ComSerForSubComPac.

28. ComSerForSubComLant and ComSerForSubComPac, so far as practicable, will insure that all ships leaving ports after 20 May 1944 include a minimum of one Q RPA Op within the established Hospital Corps complement.

29. Ships' crews will be tested, whenever practicable, while ships are in port.

30. Commandants are requested to issue repeated travel orders to the pharmacist RPA technician of the district to allow freedom of movement within the district, in order to aid in the establishment of testing programs and to supervise the operation of testing programs.

31. Directors of training of each of the several naval districts are directed to provide dark-room facilities (See enclosure (2), paragraph A(1), page 4) and to arrange schedules for testing night vision of all deck personnel at appropriate activities under their jurisdiction, beginning about 30 April 1944, and continuing at other naval activities as rapidly as Q RPA Op are available.

32. Senior medical officers at all activities in which naval personnel will be tested are directed to make available for this purpose three Q RPA Op per adaptometer for the duration of the local testing period.

33. Q RPA Op will forward, via the senior medical officers, all RPA test score cards (enclosure 2) and three copies of the monthly reports (enclosure 1) to the pharmacist RPA technician for their district.

34. All RPA test score cards will be forwarded to BuMed by pharmacist RPA technicians.

35. Pharmacist RPA technicians are directed to forward monthly reports (enclosure 1) (See paragraph 33 above) of all tests received from Q RPA Op within their district or command to (1) BuMed and (2) DistCom or command.

36. It is not considered desirable to utilize Hospital Corps WAVES in connection with subject.

--BuMed. Ross T. McIntire. --BuPers. L. E. Denfeld.

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ENCLOSURE (1)

Activity..... .....
(Date)

REPORT OF NIGHT VISION TESTS
(Radium Plaque Adaptometer)
FOR MONTH OF.....1944
(To be forwarded by Pharmacist before 10th day of following month)
Ref: (a) BuPers, BuMed joint ltr P2-5/P3-1(103-51), BUMED-H-3-CRE; P11-1, Pers-423g, Restr. dated 22 March 1944.

Name (Alphabetical)	Rank/ Rate	Ship/ Station	Score	Grade (Pass/Fail)	Date Tested	Initials (Q RPA Op)
		Local activities will duplicate this form				

GRADE OF EACH OFFICER AND MAN TESTED MUST BE ENTERED IN (1) SERVICE RECORDS AND (2) HEALTH RECORDS, BY LOCAL ACTIVITY.

Report certified correct by:

.....(Q RPA Op)
.....(Q RPA Op)
.....(Q RPA Op)

Approved:

.....
(Senior Medical Officer (Local activity))

Serial number of RPAdaptometers used:

No..... Charged to:.....
No..... Charged to:.....
No..... Charged to:.....
No..... Charged to:.....

SMO will forward three (3) copies to Pharm. RPA Technician for District or Command.

Pharm. RPA Technician will initial and forward one (1) copy to BuMed, and one (1) copy to DistCom or Command.

ENCLOSURE (2)
REVISED
INSTRUCTIONS FOR OPERATION
AND MAINTENANCE
RADIUM PLAQUE ADAPTOMETER

A. GENERAL DESCRIPTION

1. The Radium Plaque Adaptometer is a portable device, entirely self-contained, for the rapid determination of night vision efficiency of personnel.

2. The instrument is housed in an imitation leather covered wooden case, 11-1/4 inches by 13-1/4 inches by 5-9/16 inches, with removable and interchangeable front and back covers. The total weight is approximately ten pounds. It is delivered in a wooden crate 14 x 17 x 8 inches, weighing 23 pounds gross.

B. DESCRIPTION AND OPERATION OF PARTS

1. The adaptometer consists of five major parts - a fixation object, a luminous plaque with superimposed Tee, a calibrated neutral filter, a shutter, and a control panel for operating the machine.

2. The fixation object is a lighted red cross at the top of the front panel. A flashlight lamp, "A", connected in series to two #6 dry cells, "B", illuminates the cross and also furnishes light for the control panel through the red filter "H". A switch, located at the top of the control panel operates this light.

3. The sheet steel, door type shutter is pivotally mounted on the front panel. The hinges are spring loaded for convenience and speed of operation. A small lever, "E", located at the base of the control panel on the operator's left, controls the shutter.

4. The neutral filter is hinged in the same manner as the shutter, with the operating lever "F" located in a corresponding position on the operator's right. The shutter must be opened whenever the filter is operated, or damage to the filter will result.

5. The luminous plaque is located directly behind the shutter and filter. The entire plaque is turned by a knob, "C", in the center of the control panel. The position of the Tee on the plaque is indicated by the letter on the knob opposite the indicator pointer on the back panel. Position may be determined by feel, using the projection, "D", on the control knob.

(Picture omitted - Will appear in Printed Copy)
Back view of Instrument with Battery Cover Removed.
(Taken from present instructions)

The small lug wrench taped to the floor of the control panel fits the set-screw which secures the control knob to its shaft. This screw must be kept tight at all times.

The plaque must never be exposed except in total darkness. Exposure to light makes the plaque so bright that even a night-blind man can see it easily.

If the face of the instrument is opened in the light for inspection or repair, the machine must be left in total darkness for four (4) hours before it is used for testing.

C. ADJUSTMENT, REMOVAL, AND REPLACEMENT OF PARTS

1. Should the battery or lamp require replacement because the working light burns out, the battery cover at the back of the instrument must be removed. Six wood screws hold this part in place.

2. The lamp unscrews as any ordinary flashlight lamp does. Spare lamps are provided in the cavities "G" uncovered by removal of the battery cover. This lamp is a standard Mazda #13, Navy #17-L-6340 (Type TB-3).

3. The dry cells may be replaced with any standard #6 cells. Series connections are used. Red wires should be attached to the positive (center) terminal of the cells.

4. If the filter holder or the shutter fails to open the full distance when the lever is operated, this can be corrected by adjusting the set screws on the shaft of the filter holder or shutter.

5. In case complete replacement of either filter holder or shutter should become necessary, the front panel must be removed from the instrument assembly. To remove the front panel the entire instrument assembly must be taken from the case. Remove the four wood screws at the corners of the front panel, and pull assembly forward through the front openings of the case. The front panel is held to the assembly by seven wood screws through the back panel. The lower two and the center one can be removed immediately. To reach the others, the battery cover and batteries must be removed as explained in Paragraph C-1 above. With the front panel free, the set screws on the shafts of lever controls "E" and "F" should be removed and the shafts can then be withdrawn to release the filter holder or shutter.

6. If it becomes necessary to replace the plaque, it is strongly recommended that the instrument be returned to the Naval Medical Supply Depot at Brooklyn, N. Y. If such procedure is not practical and if the proper equipment is available, replacement may be accomplished in the following manner: Remove the assembly from the case in accordance with paragraph 5 above. By then removing the set screws in the control knob the plaque holder can be pulled through the front opening of the panel. The plaque is held by several spring fingers and cemented in place with shellac. The assembly must be gently warmed to soften the shellac before lifting the plaque. In replacing the plaque the position of the original Tee must be duplicated so that the position indicator will show the correct position. When the plaque assembly is ready to be placed in the case, care must be taken to lift the positioning lever free of the square positioning cam on the rear of the plaque assembly. This may be easily done by reaching through the opening at the right edge of the instrument assembly between front and back panels with a pencil to support the lever. Replacing the control knob and set screw completes the assembly.

7. If the instrument is not in regular use, the plaque knob should be rotated weekly with abrupt stops in order to prevent the radioactive powder from settling.

This stirring up is particularly necessary on shipboard where vibration may aggravate the problem.

8. Care must be exercised that the front and back covers are properly held in place by the catches. These are located in the top of the case directly above the finger holes in the covers. Pressure must be exerted on the catches themselves when closing, or the covers are not fastened.

The instrument should be stored in a horizontal position, face down, when not in use. Aboard ship, some care should be taken to cushion the vibration of the ship against the instrument by placing the instrument on a pillow or folded blanket.

INSTRUCTIONS FOR ADMINISTERING THE NIGHT VISION TEST WITH THE RADIUM PLAQUE ADAPTOMETER

Under no circumstances report test results on subjects until you are thoroughly familiar with the procedure, and have tested at least 50 men under the supervision of someone experienced in giving the test.

KNOW YOUR JOB

The purpose of this test is to tell which men are so poor in Night Vision that they cannot be depended on to stand a good lookout watch at night. These men must be eliminated from the night watch, in the interest of the safety and fighting efficiency of our ships. You must always test with greatest care and conscientiousness, for a great responsibility rests on you. This testing procedure must be followed exactly; otherwise your results will not be dependable, and night-blind men may slip through.

The testing procedure is designed so that each man may be properly tested in the shortest possible time. When the test is given correctly, it runs off smoothly and no unnecessary time is spent in the dark.

This procedure is set up to determine as fast as possible whether or not a man can see at a very low light level. He is given enough trials to make sure of this.

A. EQUIPMENT

The following items essential to successful testing of night vision must be provided by each ship or station using a Navy Radium Plaque Adaptometer:

1. Darkroom. The test must be conducted with the subjects and the adaptometer in a completely dark, light-tight room. If the subjects are to enter or leave the testing room while a test is in progress, a light-trap or double set of doors should be provided so that light never comes into the room. If a light-trap or double doors are not provided, be sure that both the subject's eyes and the radium plaque are protected when the door is opened.

2. Navy Red Dark-Adaptation Goggles. Every subject must be properly dark adapted before being tested. This may be done by wearing the Navy red-dark adaptation goggles for 20 minutes, followed by 10 minutes in the dark. If the adaptation goggles are not available, the subjects may be adapted by spending 30 minutes in the dark. Using these goggles, a large number of men may be adapted at once outside the dark-room. Then as many men as the testing room will conveniently hold may complete their adaptation while men adapted ahead of them are being tested. A close check must be kept to insure that each man spends his full time adapting. A man who is not properly dark-adapted will fail the test.

3. Chair and Chin Rest. These must be provided to make sure that tests are conducted at the proper distance from the adaptometer. A simple form of chin rest may be made by fastening a six-inch block of two-by-four to the top of the back of the chair. The top of this block should be rounded out and sand-papered smooth. With the chair facing away from the adaptometer and the subject straddling the chair, chin in chin rest, the possibility of his leaning forward is eliminated.

4. Table and Five-Foot Measure. The fixation cross of the adaptometer should be exactly five feet from the chin rest, and close to the level of the subject's eyes. The adaptometer should be placed on a table approximately 3-1/2 feet high, to be at the correct height. To insure that the five foot distance is accurately maintained, it should be measured, and the table and chair both secured to the deck if possible.

5. Test Cards. The following is a sample of the test card to be used. These may conveniently be mimeographed or printed on a 3" by 5" card.

FRONT

.....	.....PASS
Name	Rank/Rate FAIL
.....	.....
Date	Station
Time GOGGLES ON.....	
Time INTO DARK.....	
Time TEST STARTS	
REMARKS:	
NIGHT VISION TEST. Radium Plaque Adaptometer.	

BACK

NEVER TEST UNLESS RED GOGGLES ON TWENTY (20) MIN. AND TEN (10) MIN. IN TOTAL DARK, OR THIRTY (30) MIN. IN TOTAL DARK, IF NO GOGGLES AVAILABLE:	
R D L U L R D D R U U L D D R L U L U R	Encircle classification on BOTH sides of card.
D U U L R D L U R L D R U L R D L R U D	PASS: 10/10 16/20, 17/20, 18/20, 19/20
L D U R D L U R R U L R U L D D R L U D	FAIL: 15/20, or less.
Tested by:.....	

The front of the card should be filled out before the subject enters the dark-room; the back is marked during the test. A supply of pencils should be kept with the instrument for the operator's use.

B. TESTING PROCEDURE

The fundamental testing procedure must be so familiar to you that you can run through it without hesitation. Be sure that you know it thoroughly.

1. Whenever possible give a description of the test to the men before they enter the dark room. A cardboard mock-up of the adaptometer will be very useful.

2. Before testing, make sure that the men to be tested are fully dark-adapted.

3. After the first subject has been in the dark ten minutes, take your place behind the adaptometer, and remove the front and back covers from the machine. Turn on the fixation and working lamp, make sure that the subject is in the testing chair, and that he has removed his goggles; then begin!

a. Call the man's name from the card. "Is your chin in the chinrest? Do you see the red cross? All through the test look straight at the cross. Remember, keep your eyes on it all the time; don't look anywhere else." Open the shutter and filter and expose the figure at the practice level for several seconds. "Do you see the plane beneath the cross? Which way is it pointing?" Close shutter, change position of Tee, reopen shutter. "This time?" If the man calls the position of the plane correctly from the start, give four exposures, one each with the plane in the four positions. Be sure to practice ahead of time with the Control Knob so that positioning the target can be done quickly and accurately. If the man does not answer promptly, name the direction of each

exposure for him until he recognizes them; then let him start calling them himself. As soon as you are satisfied that the man understands his job and is calling the exposures correctly, close the filter and use the testing level.

b. "All right, we're ready to go. When I say 'Ready', the plane will flash on. Each time it appears, tell me which way it is pointing. If you're not sure, play any hunches you have. It's always better to guess than to say you don't know. Don't be afraid of guessing. All right now? Look at the cross! Ready!" Open the shutter, and close it as soon as the subject has answered. Never leave it open longer than four to five seconds. You will find that a one-second exposure is long enough for most subjects.

c. A good technic to use when a tone of uncertainty appears in the responses is to repeat the man's answers on each trial and add, "That's right, keep trying." This should not interrupt the rhythm of testing. Throughout the test, strongly encourage guessing when the man is slow to answer. Ask him "How about a guess?" or "Any hunch?" Remind him frequently to keep his eyes on the cross. The scoring system has already been designed to include the subject's guesses.

4. Success in testing depends very much on your manner of giving the instructions. The light level is so low that most of the subjects will often feel uncertain and hesitant about responding. A friendly, encouraging manner will give them confidence and help them to respond correctly. An abrupt or impatient manner will provoke many "Don't know's," and may even antagonize the subject. When this happens, the test is surely not valid, for complete cooperation of subject and operator is essential for good test results.

The subject should be encouraged to reply quickly. Try to establish an even rhythm of testing - i.e., exposure - reply - exposure - reply. With practice, positioning the target and recording errors will become mechanical and should not disturb this rhythm.

5. Additional rows are supplied in case the subject did not understand your instructions. To mark the cards, simply draw a line through the trial on which a man fails to give the correct answer, whether he gives a wrong reply or says "I don't know." If he changes his mind after answering, always score him on his second reply, whether it is right or wrong. Never open the shutter a second time on the same trial, even though he may ask you to.

6. The actual score is recorded as the number of targets reported correctly out of the total number of trials given. For example, if 14 correct responses are given out of 20 trials, the score is recorded 14/20, and the classification FAIL is encircled.

7. The test procedure is designed to speed up the testing of men by giving each man enough trials to make sure that he should get a particular classification.

First ten trials. If all ten trials are correct, stop the test. If less than three are correct, discard the results and re-instruct the subject until you are sure that he understands the test and that he is really trying. Then begin the test again on the next pair of lines.

8. Grading

The following scores give a grade of PASS:

10/10, 16/20, 17/20, 18/20, 19/20.

The following scores give a grade of FAIL:

15/20 or less.

The classification which each man receives should be encircled on both sides of his test card.

9. When testing of a group of men has been completed, be sure to turn off the fixation cross, and replace both covers on the machine before any lights are turned on in the testing room. This is important to prolong the life of the battery, and to make sure that the plaque is never exposed to light.

10. Short form of instructions: After you have developed your skill in handling the adaptometer and in testing men, you will find that you can shorten the instructions when men are waiting to be tested in the same room as the adaptometer. These men will have heard the test run through, and will have an idea of what they are to do. The instructions may become as brief as: "O.K., (man's name), chin in the chin rest? Remember, keep your eyes on the cross all the time. Which way is the plane pointed? This time?"--etc.

11. Even though these instructions are carefully followed, some subjects will have difficulty with the test. It may be that they did not understand your directions, or that they are not really trying to pass the test. When a man is doing poorly because he does not seem to understand the task, open the shutter and move the filter out of the way. Ask him if he sees the cross and the plane, and explain to him that he must look at the cross all the time. Tell him which way the plane is headed. Tell him that it doesn't move. Give him repeated practice trials, and instruct him over and over until you are sure that he understands the job.

Some of these men will not look at the fixation cross, but will look straight at the plane. If this seems to be the case, open both filter and shutter and tell the man to look back and forth from the cross to the plane. Ask him if he cannot see why you want him to watch the cross - how much clearer the plane stands out when he is looking at the cross. Tell him that he'll be through much sooner if he watches the cross and gives the correct answers. Stress the fact that answering correctly will shorten the test.

Men who are not trying to pass the test are more difficult to handle than the men who fail to understand. It will take all your skill and experience to detect these men and to obtain a correct test score on them. They are more commonly spotted in two ways: First, they often get all their trials correct at the practice level without difficulty, and then say they can't see anything at all at the test level - not even the lighted area. Second, they give incorrect answers on all the trials at the test level. This is almost impossible to do unless they see the plane, since by guessing they are bound to get some right.

When the man is reporting incorrectly on all the trials at the test level, tell him that he can't possibly be wrong all the time, and that he must be able to see the plane. Tell him that he must have misunderstood the instructions and to try

again. Then give him a few more trials at the practice level and go on with the test.

When you are sure that the subject has not been trying, always give him an "out", an alibi, so that he can start giving the right answers without having to admit that he was careless. Suggest that he may have his goggles on, or that he was not looking at the cross. Otherwise he will often persist because he is ashamed to have done so poorly.

The operator should do everything in his power to encourage and persuade the subject to passing. It is not difficult for a man with adequate night vision to fail the test through misunderstanding, carelessness, or poor physical condition of a temporary nature. It is impossible, however, for a man who cannot see to guess himself into the PASS category, provided:

1. The plaque has not been exposed to light.
2. The subject is seated at the proper distance from the machine.
3. Exposures are never longer than 4-5 seconds.
4. The operator is careful not to hint the correct answer.

12. The test reports should be entered in health and service records. The following are sample rubber stamps, now in use:

a. Service Record

U.S.S.....
Date.....
NIGHT VISION TEST with Radium Plaque ADAPTOMETER.
PASS.....FAIL.....

b. Health Record:

U.S.S.....
Date.....
NIGHT VISION TEST with Radium Plaque ADAPTOMETER.
PASS.....FAIL.....

Note: Men who are FAIL should not be used for night lookout duties. Select lookouts from the PASS group on the basis of other qualifications.

RETEST after 6 MONTHS.

13. Final Instruction.

Always be careful and conscientious. The results of this test will determine who is and who is not visually qualified to perform night duties. Errors in recording, and short cuts not allowed by the instructions may ruin your results.

1. Be careful - follow instructions exactly.
2. Always be sure the plaque has not been exposed to light.
3. Make sure that every man has been fully dark-adapted.

DON'T LET A NIGHT BLIND MAN STAND A LOOKOUT WATCH

* *

ENCLOSURE (3)

USNavHosp..... .....
(or other activity) (Date)

To: BuMed.

Ref: (a) BuPers, BuMed joint ltr P2-5/P3-1(103-51), BUMED-H-3-CRE; P11-1, Pers-423g, Restr. dated 22 March 1944.

REPORT OF QUALIFIED RADIUM PLAQUE ADAPTOMETER OPERATORS (Q RPA Op)

Name (Alphabetical)	Rate	Service Number	Date under Training	Date Qualified	Initials of Pharm. RPA Tech.
		Local activities will duplicate this form			

Approved:

.....
MedOfCom (or SMO)

* * * * * *

To: All Ships and Stations.

PERS-6303-DW
P16-3/MM
BUMED-R1-JLA
P16-3/MM(034)
30 March 1944

Subj: Enlisted Personnel With BuPers Approved Classification for Limited Shore Duty.

1. During the past year the Bureau of Naval Personnel, on recommendation of the Bureau of Medicine and Surgery, has transferred a considerable number of enlisted men with service-connected disabilities to continental shore stations on approved reports of medical survey, and forms NavMed "Y", for limited duty on shore.

2. Reexamination after periods of three (3) or six (6) months ashore were prescribed in many cases, to determine subsequent physical fitness to perform all duties of rating at sea. In many such instances the records do not indicate

that reexamination has been made, as directed, and men have been continued on shore duty with mobilization-ashore classification.

3. Various commands have informed the Bureau that some men in this category are found not physically qualified to continue on active duty. In other instances it has been reported that their physical condition and inability to perform useful active duty warrant separation from the naval service.

4. All men retained on active duty with mobilization-ashore classification are chargeable against the complement of the activity to which assigned, and are not permitted to be carried in excess. When men in this category cannot perform the duties of their rating, and are assigned to other duty, request should be submitted to the Bureau for appropriate change of rating within the same pay grade. Otherwise, individual activities should report the facts to the district commandant (or administrative command) with a view of transfer to another activity where a vacancy in complement exists.

5. Requests for transfer to other administrative commands should not be forwarded to the Bureau, except in cases where transfer for climatic or physical reasons is recommended by the medical officer, and the forwarding endorsement should so state.

6. Administrative commands, commanding officers, and medical officers should critically appraise the ability of men in this category to perform active duty. Notwithstanding the Bureau's prior classification for limited duty on shore, if in the opinion of the commanding officer the man's physical condition is believed such as to warrant release from active duty, and it is considered he is not rendering useful service in the war effort, he shall be brought before a board of medical survey, with a view of recommending discharge or release from active duty. Boards of medical survey shall carefully consider all facts in the case and shall include, if applicable, a statement in the survey report as to the man's inability to perform further useful active service as evidenced from actual performance of duties assigned.

7. The Bureau of Naval Personnel has prescribed that enlisted personnel of the Regular Navy with mobilization-ashore classification will not be permitted to reenlist or extend their enlistments, but are to be held in an extended enlistment status for the duration of the war, unless sooner discharged by reason of medical survey, or transferred to the Fleet Reserve upon completion of the required service for transfer. When reclassified by the Bureau for all duties, reenlistment or extension is authorized.

8. In order to reduce the number of enlisted men on shore duty, having Bureau approved mobilization-ashore classification, all continental shore activities are directed to reexamine men in this category semiannually (March and September)

with a view to reclassification for all duties. Such reexamination shall include any special examinations as by X-ray or other procedures which may be pertinent to the condition which led to the man's being classified for limited duty. Should reexamination confirm prior classification for shore duty only, a report need not be submitted to the Navy Department. Appropriate entries, however, shall be made in service and health records. Should reexamination result in a determination that a man is qualified for all duties, a report of the examination including results of any special examinations which may have been conducted, shall be submitted on NavMed Form "Y" with appropriate recommendations to the Bureau of Medicine and Surgery. Upon receipt of approval of the Bureau of Naval Personnel of reclassification for all duties the men concerned shall be transferred to the nearest receiving ship or receiving station for general detail.

9. The initial semiannual examination shall be undertaken upon receipt of this directive.

--BuMed. Ross T. McIntire. --BuPers. L. E. Denfeld.

* * * * * *

To: All Ships and Stations. Pers-511, L13-2
BuMed:R3:JNR

Subj: Life Insurance Claims and Medical Records. P3-5/P19-1(034-42)
30 Mar 1944

Encls: (A) Veterans' Administration Insurance Form 357.
(B) Veterans' Administration Insurance Form 579c.
(C) Veterans' Administration Insurance Form 579.
(D) Veterans' Administration Insurance Form 579a.

1. The Administrator of Veterans' Affairs has requested that claims for benefits under the National Service Life Insurance and the U. S. Government Life Insurance submitted by members of the Navy, Marine Corps, and Coast Guard be accompanied by information relative to the nature, extent, and duration of their disabilities.

2. The claims referred to are those where members of the service on active duty, whose discharge from the service is not contemplated, file claims because of temporary total disability for waiver of premiums under National Service Life Insurance, for payment of benefits under the special additional disability provision of the U. S. Government Life Insurance, or for payment of benefits of total and permanent disability under U. S. Government Life Insurance contracts.

3. In such cases, in addition to the date of entry into active service and other usual identifying data, the Veterans' Administration requires a summary of the medical history including the date of onset of the disability, date placed under

treatment, symptoms, subjective and objective, severity and duration of disability, periods rendered unfit for duty, periods of hospitalization, present condition, date of last examination, diagnosis and prognosis. As a general rule, it is believed that a certified transcript of the medical history in the current health record relating to the disability in question will serve the purpose.

4. The Veterans' Administration Insurance Form 357 should be used in making claims for waiver of premiums under National Service Life Insurance, Veterans' Administration Insurance Form 579c in making claims for payment of total disability benefits under the special additional disability provision of United States Government Life Insurance, and Veterans' Administration Insurance Forms 579 and 579a in making claims for total and permanent disability benefits under United States Government Life Insurance. A supply of these forms, copies of which are attached, will be furnished by the Veterans' Administration upon request. If such forms are not available, any written statement, signed by the claimant, showing a clear intent to claim the benefit, will be acceptable as an informal claim.

5. The claims accompanied by the required information should be submitted, via the claimant's commanding officer, to the Insurance Claims Council, Veterans' Administration, Washington 25, D. C. Where the complete medical history is not available in the current health record, the claims and available medical history of naval and Marine Corps personnel shall be forwarded to the Veterans' Administration, via the Bureau of Medicine and Surgery. When the complete medical history is not available in the current health records of Coast Guard personnel, the claims and available medical history shall be forwarded to the Veterans' Administration, via the Commandant, U. S. Coast Guard, Washington, D. C.

6. It should be borne in mind that at least 6 consecutive months of total disability, beginning before age 60, are required as a basis for entitlement to waiver of premium under National Service Life Insurance and 4 consecutive months of total disability, beginning before age 65, as a basis for entitlement under the special additional disability provision of United States Government Life Insurance. There is no age limit on insurance claims for total and permanent disability. Ordinarily, therefore, a claim or medical summary should not be prepared until the minimum required period of total disability has existed.
--BuPers. L. E. Denfeld. --BuMed. L. Sheldon, Jr.

* *

ENCLOSURE (A)

Veterans Administration
Insurance Form 357
Rev. July 1942

STATEMENT OF CLAIM FOR WAIVER OF PREMIUMS OR CONTINUATION OF WAIVER OF PREMIUMS UNDER THE NATIONAL SERVICE LIFE INSURANCE ACT OF 1940, AS AMENDED

This form is to be executed by the insured if competent, or by the committee or guardian if insured is incompetent. If the person executing this claim is the committee or guardian of the insured, give date and designation of court appointment.....
.....

1. .....
(Name of insured) (First) (Middle) (Last)
2. C-Number.....K-Number..... N-Number.....
3. .....
(Home address) (Street & Number) (Post Office) (State)
4. Mail address.....
5. Make (x) after branch of service in which insured served--
Army..... Navy..... Marine Corps..... Coast Guard.....
6. Rank..... Organization.....
7. Serial Number.....
8. Date of enlistment..... 9. Date of discharge.....
10. Did insured apply for (a) Disability Compensation.....(b) Disability Allowance.....(c) Retirement pay.....(d) Pension.....
11. On what date does the insured allege that continuous total disability caused him to cease work, or if in military or naval service, be relieved from duty?
.....
12. What disease or injury causes the insured to be totally disabled?.....
.....
13. Places and dates of residence of insured since the date on which the alleged total disability began, and for two years prior thereto--
Street and Number or R.F.D. Post Office State Date

14. Names and addresses of hospitals at which the insured has been treated--
Name Address Date of Admission Date of Release

15. Give names and addresses of all doctors who have attended the insured for the disease or injury causing continuous total disability (except doctors who only may have treated the insured while both the insured and the doctors were in the military or naval service). Also date of treatment. If insured

has been examined or treated by a private physician, or physicians, during the past year submit a supplemental statement by such physician, or physicians, under oath, preferably on the physician's letterhead, showing length of time under treatment, history of condition, physical and laboratory findings, diagnosis and prognosis, and any other pertinent medical data relating to the insured's condition.....
.....
.....
.....
.....
.....

16. Does or did insured have other insurance?..... If so, please give--

Name of Company	Amount	Date of Issue	Amount and beginning date of disability payments, if any

17. State below occupation since the beginning date of continuous total disability, including names and addresses of all employers, beginning and ending dates of employment, usual number of hours worked each day, number of days worked each week, average weekly wages, amount of time lost on account of illness, reason for termination of employment. If self-employed, give nature of business, period, volume of business, help employed, gross and net income, time lost on account of physical condition. If employed, state periods and reasons. Statement should account for the entire period since the beginning date of total disability. DETAILED ANSWERS MUST BE MADE HERETO.

18. I consent that any physician or surgeon who has treated or examined me for any purpose, or whom I have consulted professionally, any insurance company or organization to which I have applied for insurance, or any person, persons, firm or corporation to whom, or to which I have applied for employment, may divulge to the Veterans Administration or testify as to, or produce in Court, any information obtained by them, or it, concerning myself by reason of the foregoing, and waive any privilege which renders such information confidential.

OATH OF APPLICANT

19. I, the undersigned, being duly sworn, depose and say that each question has been truthfully and completely answered to the best of my knowledge, information and belief, and I hereby make claim for waiver of the payment of premiums or continuation of waiver of the payment of premiums in accordance with the provisions of Section 602, National Service Life Insurance Act of 1940, as amended, under policy Number N.....in the amount of $..... I UNDERSTAND, HOWEVER, THAT TO KEEP MY POLICY IN EFFECT, I MUST CONTINUE TO PAY PREMIUMS

UNTIL NOTIFIED TO THE CONTRARY BY THE VETERANS ADMINISTRATION.

.....
(Signature of insured, guardian or legal representative)

20. (If applicant is in the military or naval service application may be sworn to before a commissioned officer.)

Subscribed and sworn to before me this.....day of.....
.....19 ..... by ..... to me personally known, and to whom statements herein were fully made known and explained.

.....
(Notary Public)

PENALTY--Section 615. "Any person who shall knowingly make or cause to be made, or conspire, combine, aid, or assist in, agree to, arrange for, or in any wise procure the making or presentation of a false or fraudulent affidavit, declaration, certificate, statement, voucher, or paper, or writing purporting to be such, concerning any application for insurance or reinstatement thereof, waiver of premiums or claim for benefits under National Service Life Insurance for himself or any other person, shall, upon conviction thereof, be punished by a fine of not more than $1,000, or imprisonment for not more than one year, or by both such fine and imprisonment."

* *

ENCLOSURE (B)

Veterans Administration
Insurance Form 579c

Claim Number
C-

STATEMENT OF CLAIM FOR BENEFITS UNDER SECTION 311 OF THE WORLD WAR VETERANS' ACT, 1924, AS AMENDED
Special Additional Disability Provision

This form is to be executed by the insured if competent, or by the committee or guardian if insured is incompetent.

1. .....
(Name of insured) (First) (Middle) (Last)
2. File numbers--T ..... K ..... C .....
3. .....
(Home address) (Street and number) (Post Office) (State)
4. Mail address--

5. Did insured apply for (a) Disability Compensation..... (b) Disability Allowance..... (c) Retirement pay..... (d) Pension.....
6. Make (x) after branch of service in which insured served--
   Army..... Navy..... Marine Corps..... Coast Guard.....
7. Rank..... Organization.....
8. Serial Number.....
9. Date of enlistment.....
10. Date of discharge.....
11. On what date did the insured allege total disability caused him to cease work?

12. From what date does the insured claim to have been totally disabled?

13. What disease or injury causes the insured to be totally disabled?

14. Has insured returned to work?..... If so, give date on which he returned.....
15. Places and dates of residence of insured since the date on which the alleged total disability began, and for two years prior thereto--
    Street and Number of R.F.D. Post Office State Date

16. Names and addresses of hospitals at which the insured has been treated--
    Name Address Date of Admission Date of Release

17. Give names and addresses of all doctors who have attended insured for the disease or injury causing total disability. Also date of treatment.

18. If insured has been examined or treated by a physician, or physicians, during the past year submit a supplemental statement by such physician, or physicians, under oath, preferably on the physician's letterhead, showing length of time under treatment, history of condition, physical and laboratory findings, diagnosis and prognosis, and any other pertinent medical data relating to the insured's condition.

19. Does or did insured have other insurance? If so, please give--
    Name of Company Amount Date of Issue Amount and beginning date of disability payments, if any

20. If person executing claim is the legal representative of the insured or the personal representative of his estate, give date and designation of court of appointment.

21. Give complete details of occupational history from a date three years prior to the alleged date of total disability.

22. I consent that any physician or surgeon who has treated or examined me for any purpose, or whom I have consulted professionally, any insurance company or organization to which I have applied for insurance, or any person, persons, firm or corporation to whom, or to which I have applied for employment, may divulge to the Veterans Administration or testify as to, or produce in Court, any information obtained by them, or it, concerning myself by reason of the foregoing, and waive any privilege which renders such information confidential.

OATH OF APPLICANT

23. I, the undersigned, being duly sworn depose and say that each question has been truthfully and completely answered to the best of my knowledge, information and belief, and I hereby make claim for waiver of the payment of premiums and the payment of the monthly income in accordance with the Special Additional Disability Provision attached to and made a part of United States Government Life Insurance policy, Number K..... in the amount of $..... I UNDERSTAND, HOWEVER, THAT TO KEEP MY POLICY IN EFFECT, I MUST CONTINUE TO PAY PREMIUMS UNTIL NOTIFIED TO THE CONTRARY BY THE VETERANS ADMINISTRATION.

.....
(Signature of insured, guardian or legal representative)

24. Subscribed and sworn to before me this..... day of .... 19 .....by .....to me personally known, and to whom the statements herein were fully made known and explained.

.....
(Notary Public)

Section 501 of the W. W. V. Act, as amended, provides as follows:

"That whoever in any claim - compensation or insurance, or in any document required by this Act, or by regulations under this Act, makes any sworn statement of a material fact knowing it to be false, shall be guilty of perjury and shall be punished by a fine of not more than $5,000.00, or by imprisonment for not more than two years, or both."

* *

ENCLOSURE (C)

Veterans Administration
Insurance Form 579
Rev. March 1940

Claim Number
C-

STATEMENT OF CLAIM FOR INSURANCE--TOTAL PERMANENT DISABILITY

This form is to be executed by the insured if living and competent, or by the Committee or guardian if insured is incompetent; if insured is dead by the personal representative of the estate, or if there is no personal representative, the statement of claim must be executed by the beneficiary under the insurance contract. All information herein requested must be given--if not furnished, reasons for failure to do so must be stated.

1. .....
Name of insured (First) (Middle) (Last)
2. File Numbers--T..... K..... C.....
3. .....
Home address (Street and number) (Post Office) (State)
4. Mailing address--

5. Did insured apply for (a) Disability Compensation.....(b) Disability Allowance..... (c) Retirement pay..... (d) Pension.....
6. Make (x) after branch of service in which insured served--
Army..... Navy..... Marine Corps..... Coast Guard.....
7. Serial number.....
8. Date of enlistment.....
9. Date of last discharge.....
10. On what date did the insured's total and permanent disability cause him to cease work?

11. From what date does the insured claim to have been totally and permanently disabled?

12. What disease or injury causes the insured to be totally and permanently disabled?

13. Places and dates or residence of insured since the date on which the alleged total and permanent disability began, and for two years prior thereto--
Street and Number of R.F.D. Post Office State Date

14. Name and addresses of hospitals at which the insured has been treated--
Name Address Date of Admission Date of Release

15. Give names and addresses of all doctors who have attended insured for the disease or injury causing total and permanent disability. Also date of treatment.

16. If insured has been examined or treated by a physician, or physicians, during the past year submit a supplemental statement by such physician, or physicians, preferably on the physician's letterhead, showing length of time under treatment, history of condition, physical and laboratory findings, diagnosis and prognosis, and any other pertinent medical data relating to the veteran's condition.

17. Does or did insured have other insurance? If so, please give--

Name of Company	Amount	Date of Issue	Amount and beginning date of disability payments, if any

18. If person executing claim is the legal representative of the veteran or the personal representative of his estate, give date and designation of court of appointment.

19. INDUSTRIAL HISTORY
State below occupations since the date on which the insured was discharged from the service, including names and addresses of all employers, beginning and ending dates of employment, usual number of hours worked each day, number of days worked each week, average weekly wages, amount of time lost on account of illness, reason for termination of employment. If self-employed, give nature of business, period, volume of business, help employed, gross and net income, time lost on account of physical condition. If unemployed, state periods and reasons. Statement should account for the entire period since date of discharge from service.
DETAILED ANSWERS MUST BE MADE HERETO.

20. I consent that any physician or surgeon who has treated or examined me for any purpose, or whom I have consulted professionally, any insurance company or organization to which I have applied for insurance, or any person, persons, firm, or corporation to whom, or to which I have applied for employment, may divulge to the Veterans Administration or testify as to, or produce in Court, any information obtained by them, or it, concerning myself by reason of the foregoing, and waive any privilege which renders such information confidential.

OATH OF APPLICANT

21. I, the undersigned, being duly sworn depose and say that each question has been truthfully and completely answered to the best of my knowledge, information and belief, and I hereby make claim for payment of disability benefits under the contract of insurance.

.....
(Signature of insured, guardian, beneficiary, legal or personal representative)

22. Subscribed and sworn to before me this..... day of..... ..... 19..... by ..... to me personally known, and to whom the statements herein were fully made known and explained.

.....
(Notary Public)

Section 501 of the W. W. V. Act as amended, provides as follows:

"That whoever in any claim - compensation or insurance, or in any document required by this Act, or by regulations under this Act, makes any sworn statement of a material fact knowing it to be false, shall be guilty of perjury and shall be punished by a fine of not more than $5,000.00, or by imprisonment for not more than two years, or both."

* *

ENCLOSURE (D)

Veterans Administration
Insurance Form 579a
Rev. Oct. 1934

C No.....
T No.....
K No.....

STATEMENT OF CLAIM FOR INSURANCE - TOTAL PERMANENT DISABILITY

I, ...,
(Insured) (Guardian, legal or personal representative)

believe myself to be entitled to receive any monthly payment of benefits awarded on account of permanent and total disability of the insured under any insurance granted or issued under certificate or policy number.....
My permanent home address is.....
I desire checks mailed to.....

In support of this claim, I make the following statement as true to the best of my knowledge and belief:

1. Under what name, rank and organization did the insured serve?

.....
(Name) (Rank) (Organization)

.....
Signature of
(Insured) (Guardian, legal or personal representative)

.....
Date

* * * * * *